Chapter 6

The Japanese Economy III: Government Guidance

When people speak of "economic planning" in Japan, they usually have in mind the national economic plan prepared by the Economic Planning Agency . . . Yet, in my view, these national plans are not . . . as important as they appear at first. . . . This does not mean . . . that the Japanese economy is run without much government planning. The . . . government intervenes widely in individual sectors, industries, or regions, and there is much planning on industrial as well as regional bases. Many of the plans in individual fields appear to be quite effective in channeling resources into particular industries or regions.

—Ryutaro Komiya, 1975

The government is the captain and *zaikai* is the compass of the ship.

—Former prime minister Ikeda

The bureaucrats are very strong. Their final defeat will take five years to accomplish.

—An official of Keidanren, 1995

Formal Economic Planning

Over most of the past century, the Japanese government has tried to steer economic activity along perceived lines of national advantage, indicating which industries and regions have priority in economic development. Thus Japan has tried to combine planning with the market, hoping to get the best of each. Usually the government does not impose production targets, but it does look several years into the future and has a variety of incentives to influence the direction and pace of economic growth. Japan has also been a highly regulated economy, in which the government has maintained distribution priorities favoring farmers and other small businesses. More generally, it has favored people who derive most of their income from property—in part, to encourage entrepre-

neurship. At the same time, Japan has been spared the costly struggles over distribution that have preoccupied some Western nations.

To supervise the construction of formal plans, Japan has an Economic Planning Agency (EPA), founded in 1946, whose director-general is a cabinet member. To cover the high-growth period 1956–81, the EPA prepared eight medium-term plans, each of which was originally intended to run from 5 to 10 years.[1] More recently, its plans have had greater social content and have been broader; this includes the 13th postwar plan, which covers the period from 1996 to 2000. Formally, the EPA is the secretariat of the Economic Council, one of the prime minister's advisory bodies, and a plan takes shape after he asks that body to draw one up. However, the members of this council and of its subcommittees serve part time and largely on an honorary basis. They are mainly well-known businessmen and retired government officials, along with a few academics, labor representatives, farmers, and consumer advocates.

Thus most of the work of plan construction falls on the EPA, which also brings in representatives of government ministries and agencies when their jurisdictions are affected, since these agencies can veto any proposals in their own areas. A typical plan contains forecasts relating to output, income, prices, production in particular industries and regions, the balance of payments, shifts of the labor force, public spending, social welfare and overhead, pollution control, and so on. It also discusses the evolution of government priorities, but usually avoids or remains vague on especially contentious issues. Moreover, the plan's targets are purely indicative. The EPA has no administrative or legal power to impose controls or goals; such authority is vested in the cabinet and the ministries.

Quantitatively, its forecasts have often been wide of the mark, making most plans obsolete before they could run their course. (This is why the first eight plans covered just twenty-five years.) The first five plans dramatically underestimated Japan's economic growth, while subsequent plans have tended to overestimate it. Table 6.1 shows major targets of the 13th plan, entitled "Economic and Social Plan for Structural Reform." Key features of this plan are that growth is to be largely driven by domestic demand, rather than by exports (unlike most of the previous century), and that economic performance depends on continuing deregulation of the Japanese economy. Thus the Economic Council and the EPA support further reduction of government controls over production, pricing, finance, and distribution.

Although its forecasts have often been off target, the EPA's plans have had an impact. The agency has gathered and processed large amounts of information to facilitate the dialogue between different components of government and business. For a quarter century, its plans "predicted more or less correctly the directions of change in industrial structure, the industrial distribution of the labor force, and the composition of exports, but almost always underestimated the extent of such changes."[2] They may also have had important announcement effects, especially the famous income doubling plan for 1961–70. This plan

Table 6.1

Key Targets of Japan's Thirteenth National Economic Plan, 1996–2000

I. ECONOMIC TARGETS	With Further Deregulation (in percent)	Without Further Deregulation (in percent)
Annual Real Growth of GDP	3.00	1.75
Domestic Demand-Driven Annual Growth	3.00	1.50
Annual Increase in Consumer Prices	.75	.50
Unemployment in Year 2000	2.75	3.75
II. SOCIAL TARGETS	**Target**	**Pre-Plan Level**
Average Floor Space of Housing Units (average household has about 3 members)	100 sq. meters	92 sq. meters (1993)
Recycling of General Waste	100 percent	42 percent (1994)
Neighborhoods Within Walking Distance of a Park	100 percent	53 percent (1993)
Introduction of Optical Fiber Networking	100 percent	10 percent (1995)
Day-care Centers for Elderly	17,000 (by 1999)	3,500 (1993)

Source: Economic Planning Agency, *Economic and Social Plan for Structural Reform* (Tokyo: 1995).

forecast a doubling of Japanese national income, a feat virtually unprecedented in the history of any nation beyond the developing stage. To achieve such a goal, income and output would have had to grow at an average 7.2 percent per year. When the plan first appeared, the EPA was criticized for being too optimistic. Many economists felt that the EPA was underestimating the balance-of-payments constraint on growth, and left-wing Japanese were sure that a crisis of capitalism was just around the corner.

In fact, its forecasts were too pessimistic. GNP growth for the entire decade averaged more than 10 percent per year, and national income grew to over 2.5 times its original level, one of the most remarkable decades of growth ever recorded by any nation. Before World War II, GNP had never grown by as much as 7 percent for more than a handful of years in succession. Nevertheless, Japanese businessmen were aware that the first plan had predicted an average 5 percent growth rate for 1956–60, versus a realized 9 percent, and that the second

had foreseen growth rates for 1958–60 of 5 percent to 6 percent, versus realizations of 14 to 15 percent. These businessmen were ready to take the targets of the income-doubling plan as minima, somehow guaranteed by the government.[3] Japanese companies stepped up their investment programs, fearing loss of their shares of expanding markets or being left out of new ones. This investment fueled demand and expectations even further, helping to create the record growth. But aside from the announcement effect, the impact of formal planning on the Japanese economy appears to be minor. This leads us to a kind of planning that is more informal, but also more important in terms of its practical consequences.

Industrial Policy

One author notes that Japan has three interrelated parts to its planning process: national economic planning, regional economic planning, and industrial policy. "However, the last has had so much real force that the first two have become the residuals of industrial policy and their most successful aspects have been related to industrialization."[4] By "industrial policy," we mean programs to promote the growth, efficiency, prosperity, or orderly decline of specific industries. In this context, there are many advisory councils—like the Economic Council, except that they report to cabinet ministers instead of to the prime minister—that do long-range planning. Most of these report to the minister for international trade and industry, including an Industrial Structure Council and councils for the promotion of electronic data processing, petroleum, machinery, mining, and many other industries. Each council covers a narrower territory than the Economic Council, but partly for this reason, the advisory councils are usually more influential. In particular, the Industrial Structure Council has played a major role in shaping Japan's industrial growth strategy. The various council reports are also used by the ministries in their own planning.

Likewise, there are over 100 major industry associations that engage in long-range planning. These also act as funnels for information flowing between business and government, help to organize the transfer of foreign technology to Japan (including inspection tours of advanced companies abroad), and represent their industries in formal and informal negotiations with the government. Specifically, each association bargains with a government counterpart, called a coordination (or *genkyoku*) bureau—the state agency with primary responsibility for the industry in question. Most *genkyoku* bureaus belong to the Ministry for International Trade and Industry (MITI), and in turn are organized into divisions in charge of more narrowly defined industries.

Industry associations and *genkyoku* bureaus constantly negotiate policies, programs, and means of execution. It is here that major government policies affecting the growth of industry first take shape. However, when they emerge, [illegible] inconsistent with one another and overly ambitious

given the economy's capabilities, the government's commitments to other programs, and the balance-of-payments or government budget constraint (especially the latter in recent years). Thus a dialogue ensues, involving MITI, the Ministry of Finance (MOF), and other ministries, as well as the advisory councils and the EPA—the latter in the role of coordinator as well as information gatherer, processor, and supplier. Eventually, a consensus of sorts emerges between these elements and industry representatives. In this dialogue, each *genkyoku* bureau acts as a spokesman for its industry. Later, the industry association will have the task of persuading reluctant firms to go along with government policy. Komiya identifies five different types of industrial policy—development of a new industry, modernization, control of excessive investment, assistance to declining industries, and planned shipbuilding, which prior to 1976 was one of Japan's most spectacular postwar growth industries, although it has since declined.[5] (However, high-technology ships have become a priority during the 1990s.)

When a program emerges from a *genkyoku* bureau, it must still get approval from the Finance Ministry, which contains the Bureau of the Budget. In this context, "the veto power of the Ministry of Finance over inducements to industry based on government funding and tax concessions is formidable."[6] Then it must be passed by the Diet, implying a need for approval by the Liberal-Democratic Party's (LDP) Policy Affairs Research Council. If there is a question of violating the Anti-Monopoly Law, the Fair Trade Commission may also be a hurdle. Moreover, MITI and MOF control most instruments for implementing policies, including taxes and subsidies.

One might say that Japan has an informal planning structure—headed by MITI, MOF, peak business associations, and leading LDP politicians—that has been effective. Among the private associations, the loose structure of top business executives called *zaikai* has been especially influential, partly because it has been able to resolve disagreements internally and maintain solidarity toward the government and other private organizations. *Zaikai* dates from a meeting of business leaders the day after Japan's formal surrender to the World War II allies, which focused on ways of reunifying the country, rebuilding basic industries, and dealing with the occupation authorities soon to arrive. It embraces four peak businessmen's organizations—the Federation of Economic Organizations (Keidanren), the Committee for Economic Development, the Federation of Employers' Associations (Nikkeiren), and the Chamber of Commerce and Industry. Of these, Keidanren, the top coordinating body of big business, is most important; its chairman is widely viewed as the head of *zaikai*'s "invisible government." Senior government officials often attend meetings of Keidanren's executive, and the federation maintains its own internal structure of committees, in order to study and make recommendations on policy questions.

Other government agencies, notably the "economic" ministries—such as agriculture, forestry, and fisheries; transportation; construction; and health and welfare—plus the cabinet and *zoku* (or leading LDP) politicians share top

policy-making roles. Industry associations and *genkyoku* bureaus carry out the liaison role between industry and government, and there are informal discussions and negotiations between businessmen and government officials all the time that play an important role in the shaping and altering of government priorities. According to one author, "What began [after World War II] as an *ad hoc* and practical response to immediate needs for industrialization and increased foreign-exchange earnings has gradually become an explicit policy of changing industrial structure and comparative advantage to upgrade the economy."[7]

The array of forms and institutions to facilitate government-business interaction reflects the importance of business in the goal-forming process, but equally the need by Japanese for harmony. Without compromise and consensus, there is little hope of getting the cooperation between government agencies, industry associations, and firms that is necessary to execute policies efficiently. However, it is an understatement to say that government relies on more than voluntary compliance to achieve its goals, and we therefore turn to the implementation of government policy.

Administrative Controls and Exploitation of Technology

MITI approval is necessary for all new production facilities and additions to production capacity. While such approval is often given routinely, the government has used this means to stop expansion in industries where excess capacity was already believed to exist or where future comparative advantage was expected to be less than at present. In addition, the state has sometimes prevented firms from locating in areas where industrial concentration, congestion, and pollution were already too high, and it has become notorious for trying to prevent expansion when this would lead to greater competition. Historically, it has also controlled import quotas. That is, MITI could set formal ceilings on the amounts of fuel, raw materials, components, parts, machinery, tools, and other goods that firms were allowed to buy abroad.

Perhaps MITI's most important single authority, however, was its right to decide which companies could purchase know-how in the form of patents, and from which foreign sources. It still exercises this power formally in a few cases and is believed to do so informally in others, although its ability to carry out this kind of regulation has declined considerably since the 1970s. Thus, between 1950 and 1978, Japanese buyers made 32,000 contracts to import technology from the United States at a total cost of $9 billion—far less than the cost of developing this technology.[8] In many cases, the foreign supplier had to bargain with MITI, in effect, as the agent of the Japanese buyer. MITI participated directly in royalty negotiations, often playing potential foreign suppliers against each other or dealing with small or financially weak foreign companies. This allowed it to bring leverage to bear on foreign patent holders as a means of getting the best possible deal on technologies that Japan wanted to copy and to adapt for its own use.

Once the technology was in Japan, MITI promoted its diffusion, subject to such restrictions as the foreign supplier was able to enforce and to domestic rivalry, which makes Japanese firms (like any others) reluctant to share technical knowledge with competitors. However, Japan has had a tradition of sharing such information, which is still intact, although it has eroded since World War II.[9] (For example, industry associations still publish costs, prices, and technical data of individual enterprises.) MITI's role allowed Japanese companies to pay low royalties for imported technology until 1968, when foreign pressure forced the government to reduce its control over the acquisition process. This caused royalty payments to rise, but even in the 1980s and 1990s, Japan has been able to acquire some technology at bargain prices. According to one study, United States investment in research and development over the period 1962–88 had a much stronger effect on the growth of manufacturing productivity in Japan than did Japanese R and D investment on the growth of manufacturing productivity in the United States.

The ability to import technology at low cost, to disseminate it widely, and to achieve experience economies in the form of cost reductions and quality gains from using this technology and learning more about it, were key factors behind rapid growth in Japan and later in other East Asian economies. These countries also benefited from United States's willingness to open its market to their exports, in order to stimulate growth and prosperity in nonsocialist Asia. A crucial part of the ability to exploit technology efficiently has been the rapid spread of technical knowledge among Japanese users, which the government has helped to promote. Once produced, information can be jointly consumed; in this sense, it is a public good. Up to a point, making technical information available to one more user therefore increases its benefit to the economy (a process discussed more fully in chapter 7). However, requiring firms to share technical knowledge with competitors may also discourage innovation by reducing the return on investment in new products and technologies. Protection of industrial secrets therefore becomes more important as domestic producers approach the world technological frontier.

Historically, Japanese firms have exploited technology efficiently, although they have not originated as many major breakthroughs as we might expect, given the size of the manufacturing sector. In part, this has resulted from the lack of protection for industrial secrets. Since the mid-1970s, however, Japan has been much more active than before in developing new products and processes. Moreover, the Toyota system of "lean" production developed during the 1950s (including just-in-time production) represents one of the most basic and influential changes in manufacturing technology of the twentieth century.

A major factor in Japan's efficient exploitation of technology has also been the high quality standards of its industrial enterprises, which MITI and other government agencies have helped to promote. Thus, MITI carries out elaborate audits not only of products, but also of production processes, and works closely with firms to improve performance. MITI's Industrial Engineering Bureau re-

quires reliability tests on parts and components and makes test results readily available to Japanese firms. Finally, the government sponsors quality competitions and awards prestigious prizes, such as the all-Japan Quality Award (although the Deming Prize, Japan's best-known quality award, is not government-sponsored). MITI has also used its leverage to acquire and disseminate foreign technology in other ways, including the "first unit imported, but following units home-produced" policy. For instance, "when an electric power company built a power station and installed several units of generators, the government requested the power company, as a condition of the issue of an import license for the first unit, to request the [exporter] to give a patent and know-how license to some Japanese maker to produce the second and following units."[10]

MITI's broad control over imports—until Japan was forced by foreign pressure to liberalize its foreign trade and payments, beginning in the late 1960s—gave it leverage to regulate all aspects of an industry. In the case of petrochemicals, MITI slowed the entry of firms into the industry to ensure that existing companies remained profitable as demand expanded. It promoted the auto industry during the 1950s over opposition from the Ministries of Finance and Transportation, which wanted Japan to rely on the United States for motor vehicles. Instead, MITI gave the industry comprehensive protection from import competition through a variety of tariff and nontariff barriers, including higher taxes on cars above compact size, which were made abroad (mainly in the United States) but scarcely at all in Japan. MITI also got the industry several low-cost loans from the Japan Development Bank, along with accelerated depreciation and other subsidies, at a time when its technological level was 20 years behind the international standard.[11]

By the mid-1980s, Japan retained formal import quotas on just 27 product categories, most of which were farm goods and none of which were major industrial items. It had the lowest average tariff rate among industrial nations. Yet, per capita imports of manufactured goods were also among the lowest of industrial countries, and manufactures were an even smaller share of total imports than during the 1960s. This is partly because MITI was able to suppress imports with unofficial barriers, which preserved most of the large Japanese market for domestic firms. Only during the mid-1990s has Japan's current account surplus (measured in U.S. dollars) begun to fall from the peak reached in 1993. Beginning in 1996, the Japanese market finally appeared to be opening significantly.

Informal barriers have included bureaucratic red tape in testing and inspecting imported goods, exclusion of imports failing to meet a variety of questionable product standards, the willingness of general trading companies (which control over half of Japan's imports) to limit their handling of manufactured imports, and the fragmented, highly personalized domestic distribution system, which has [illegible] foreigners to penetrate. For goods embodying new or advanced

technology that Japanese firms have not yet adopted, however, the Japanese market is more accessible to foreigners.[12]

Domestically, MITI has been the main protagonist in promoting mergers and cartels and in weakening Japan's Anti-Monopoly Law and price competition. It has sponsored a number of special laws at different points in time that were designed to promote industries believed to have good export growth potential. Such promotion has included protection from foreign competition, restrictions on the number of Japanese producers, low-cost loans, accelerated depreciation, and formation of cartels. MITI has also sponsored laws to ease the adjustment of declining industries—likewise via subsidies, cartels, and protection from foreign competition. However, it usually subsidizes withdrawal and dismantling of production capacity that is no longer cost-effective, rather than its continuing operation at a loss.

In the case of an industry with growth potential, MITI's aim is to give firms time to gain production experience with new technologies and to reach a scale that will allow them to compete on the world market. MITI is more worried about inefficiency due to small size, lack of experience, or excessive competition—which may eliminate companies before they have a chance to make an important growth or export contribution—than it is about inefficiency caused by monopoly power. In the case of a declining industry, MITI's aim is to forestall bankruptcies among large firms, to achieve an orderly withdrawal of capacity, and to reduce financial hardships for the companies directly involved, as well as for their employees. However, while it emphasizes orderly marketing, access to supplies, and transition, the effect of MITI's intervention is usually to reduce the number of competitors in an industry and to restrict competition among those already in, including new product competition.

Thus, for many years, it was MITI's practice to allocate key imports to firms on the basis of production capacity. To a limited degree, this is still done unofficially, although informal quotas are harder for MITI to enforce and control. For example, a sugar refinery with a capacity of 100,000 tons per year would be allowed twice as much raw sugar and fuel from abroad as a refinery with a 50,000–ton capacity. Similar formulas have been applied to iron and steel mills, chemical plants, paper mills, cement factories, aluminum smelters, and others. These allocations have prevented firms from entering such an industry, unless they could persuade MITI to grant them quotas, but the practice has also led to a competitive scramble among established producers to increase capacity in order to raise their claims to imports. The prospect of a cartel has had the same effect, since cartels assign production and import quotas to member companies on the basis of existing capacity or market share.

But while the result has been to raise investment within the industries in question, it has also been to create excess capacity within these same industries. On the one hand, MIT has allocated import quotas in a way that has raised the incentive to invest, and its known enthusiasm for cartel formation has had the

same effect when cartels were anticipated. Yet the primary purpose of a cartel is to restrict output and investment, so as to prop up prices. Thus MITI has promoted investment that led to excess capacity and then promoted cartels to restrict investment in the same industries. Whenever an official cartel is formed, Japan's Anti-Monopoly Law requires a government agency, usually MITI, to participate. A MITI representative therefore sits on the steering committee that manages the cartel, providing a convenient avenue for MITI to monitor and to influence the arrangement. Consequently, we may suspect that MITI has sometimes used its leverage and the prospect of a cartel to produce the excessive investment that became the grounds for cartel formation.

However, this activity has been made more difficult by the liberalization of international trade and payments, which has forced Japan to abandon most formal import quotas. Today, nearly all official cartels are export cartels, cartels organized under the Environmental Sanitation Act, or cartels organized under the Medium and Small Enterprise Organization Act. Similarly, most mergers involve only small- or medium-sized firms.[13] Export cartels arise because other nations now restrict their imports from Japan through formal or informal import quotas. (Japan uses the same methods.) These cartels help Japan to enforce the quotas it receives, as well as to realize such monopoly power as may result for the nation as a whole from the supply restrictions. There are also unofficial or "clandestine" cartels, which usually have MITI's blessing and even its participation. As a rule, these are backed by import barriers, most of which are also unofficial. However, in a landmark decision, the Tokyo High Court ruled in September 1980 that such cartels violate Japan's Anti-Monopoly Law. Only cartels based on clear legal exemptions from this law are now themselves legal. Previously, the status of unofficial cartels before the law had been ill defined, and this type of situation is not unusual in Japan.

In fact, MITI and other Japanese government agencies do not normally enforce their guidelines by invoking legal sanctions or penalties. Instead, they rely on a strong form of moral suasion called "administrative guidance" (*gyosei shido*). This "is a vague word for discretionary advice, wishes, requests, or sometimes threatening orders given by government officials to private firms." Normally, such guidance is "not based on any clear-cut, well-defined stipulation in laws and ordinances, [although] there is usually a vague, comprehensive stipulation in the law that a certain government agency is responsible for the orderly condition of a certain field and [that it] may take appropriate measures" to ensure this.[14]

Examples of administrative guidance would be informal input, output, or investment quotas for firms in a particular industry, a suggestion that firms specialize more narrowly by product line (in order to realize scale economies but also to reduce competition), unofficial pressure on companies to merge or to stay out of an industry, a request to buy only from domestic suppliers, and so on. "Japanese firms accept such government officials' meddling . . . [because] in a

citizens, it does not pay, in the long run, to be openly opposed to government, or so most people think."[15] Government interference has also been tolerated, in part, because it appeared to be successful in generating economic growth. Moreover, pooling of resources for collaboration in research and development does not necessarily inhibit (indeed, often enhances) future competition between cooperating enterprises. MITI's efforts to use cartels as a means of propping up prices have not been very successful.[16]

Contradictions of Industrial Policy

Perceptions can change, and formulas that successfully generate growth in one era or under one set of conditions may fail when new conditions emerge. During the slow-growth 1990s, many business leaders, and Keidanren in particular, have come to view MITI and other ministries as obstacles to expansion and modernization.[17] For companies already close to the cutting edge of technology, the cost of MITI's regulatory constraints often exceeds the value of information-related benefits that MITI provides. For such firms, expansion increasingly requires diversification into markets where existing suppliers are protected by entry barriers. High-technology industries where growth opportunities are expected to be greatest during the early twenty-first century—including biotechnology, telecommunications, and multimedia—are among the most heavily regulated in Japan. Here existing suppliers are protected, but also constrained in cutting prices and in the types of products and services they can offer, and therefore in innovating. Although MITI subsidizes them and tries to help them advance technologically, Japan has fallen behind in several high-technology fields.

When we add the declining political strength of the Liberal-Democratic Party, we have the preconditions for a fracturing of the "iron triangle" of bureaucrats, LDP politicians, and leading businessmen that has led Japan since the end of the U.S. occupation. It would be premature to announce the death of this coalition, but MITI and other agencies are now being forced to redefine their roles, and in the process, to renew the confidence of Japanese business and society. Even within the bureaucracy, support for some deregulation is growing.

From another perspective, business firms have two basic sources of above-normal investment returns, or of excess or economic profit. First, they can be protected from competition and/or receive subsidies or tax breaks. In return, politicians and bureaucrats expect some of the excess profit back in the form of favors such as votes, campaign contributions, gifts and bribes, and executive positions to step into upon "retirement" (*amakudari*) from first career. Second, firms can introduce new products, open new markets, make quality improvements or cost reductions, and so on, thereby gaining an advantage over competitors. Without protection, the resulting excess profits are likely to be temporary, until rivals catch up or leapfrog, but can usually be renewed via new

grow more rapidly than noninnovators, according to the "Schumpeterian" hypothesis.

Firms can receive the first kind of excess profit only with government help. However, state agencies can also be involved in the second type—by supplying companies with technology and technical assistance; by encouraging them to share information during new product development; by getting them tax breaks, subsidies, and low-cost loans; and by protecting them from foreign competition while they are achieving the experience and scale economies necessary to compete on the world market. In Japan, MITI has helped firms to earn both types of excess profit. From the standpoint of efficiency, growth, and living standard improvement, however, the second type is better than the first. While the first results from exploitation of customers, the second rewards a factor of production, entrepreneurship, that is critical to economic progress. Historically, nations that have relied on the first type of excess profit to generate revenue and support for the state have fallen behind others, where encouragement of entrepreneurship and innovation was stronger.

At some point, there will be a trade-off between promoting the first and second kinds of profit. If government encourages firms to innovate and to enter new markets, it will also be bringing down any barriers that protect existing suppliers of these markets. If the state forces firms to share technical information, it may discourage the most innovative companies, which are constantly obliged to contribute more to the information pool than laggards. To avoid the first of these potential contradictions, government must steer entrepreneurship into one set of markets while protecting producers in another set. One way to do this is to protect domestic markets while steering expansion of entrepreneurial firms into exports. In Japan's case, exports are essential in any event to pay for raw materials, energy, and some foodstuffs. Thus the combination of protection for domestic producers and export-led growth made sense, especially during the economic miracle years between the start of the Korean War in 1950 and the first energy crisis in 1973–74. Expansion of export industries was actively promoted by low-cost loans, accelerated depreciation and other tax breaks, access to technology developed abroad, and, possibly, by an undervalued yen.

One result was a growing contrast between efficient and inefficient sectors of the Japanese economy.[18] The inefficient sector includes agriculture and distribution, whose votes at election time have been purchased with protection from imports and from potential large-scale suppliers in Japan. This has allowed small (and high-cost) farms and shops to proliferate. It also includes construction, and even within manufacturing, differences in efficiency can be striking. In 1990, for example, labor productivity (value added per worker) in manufacturing as a whole was about 90 percent of the U.S. level. However, in food processing this ratio was only 35 to 40 percent, whereas it was over 100 percent in consumer electronics, motor vehicles and parts, steel, machine tools, and precision tools. Food processing is subject to direct regulation, as is about 40 percent of all

economic activity. This regulation hardly benefits consumers. Japan has some of the world's highest retail prices, but no modern product liability laws to protect buyers against defective goods.

The strategy of shielding domestic markets while promoting exports, and of fostering efficiency and dynamism in some sectors while others are allowed to be inefficient and uncompetitive, cannot be pursued indefinitely. Since as early as the late 1960s, Japan has been under mounting international pressure to open its markets to foreign goods and to deregulate its domestic economy. During the 1980s and 1990s, domestic pressures have pushed in the same direction. They come not only from consumers, but to an even greater extent from Japan's most efficient companies, which often feel that regulatory controls prevent them from seizing opportunities for expansion, modernization, and product diversification. At first, the Japanese government reacted by opening as slowly and as superficially as possible, and by erecting new barriers as old ones were dismantled. For example, formal import barriers were replaced by informal ones (obscure and unusual product standards, bureaucratic delays, and so on), and the rice market became completely closed only in 1969.

The pace of deregulation has speeded in the 1980s and 1990s and picked up increasing support, as noted above. During the 1990s, the perception of government bureaucracy by ordinary Japanese has become more negative, in part because of a series of bureaucratic blunders, some of which have caused death or extreme suffering.[19] Among these errors was the combination of excessive easing of monetary policy during the latter part of the 1980s—which together with deregulation of the financial sector helped to feed the speculative bubble in asset prices—and then the sudden tightening of policy that burst the bubble and plunged Japan into a recession from 1991 to 1995. Other blunders include a cover-up after an accident at a nuclear reactor, the paralysis of government in the face of the Kobe earthquake (which may have added to the earthquake's death toll), the failure to deal with the Aum Shinrikyo religious cult until it had launched a poison gas attack on the Tokyo subway, and the supply of HIV-contaminated blood to hemophiliacs and hospital patients, causing at least 400 deaths by early 1996. (The Health Ministry had refused to import sterilized blood.)

One result of the blood scandal was a recommendation that Japanese citizens be allowed to demand public access to government documents. If this becomes law and normal practice, the magnitude of change would be hard to overestimate. Heretofore, the Japanese government has operated under an absolute veil of secrecy; even politicians often don't know what is going on. (The Japanese prime minister learned of the Kobe earthquake when he turned on his television set.) Because the bureaucracy collects huge amounts of information, problems such as the distribution of HIV-contaminated blood and the rapid buildup of bad loans (which in some cases involved projects supported by organized crime) would have been less likely under a freedom-of-information law. Also, ministries would be less tolerant of firms that violate laws, standards, and norms if it

were harder to parachute from a civil service career to an executive position within the sector that the official had formerly been regulating. Greater freedom of information, restrictions on *amakudari,* and accountability of civil servants are directions in which Japanese society appears likely to move (and to a degree has moved already), although the pace of change may depend on the electoral success of other political parties versus the LDP.

For Japan to stay abreast in high-technology fields, Japanese companies and research institutes need greater freedom to make investments and to carry out research in response to demand stimuli and scientific promise. They also need greater freedom to launch new products and to set prices. Should Japan fall too far behind, it will probably be harder to catch up than it was in the 1950s and 1960s, since foreign companies and governments are now better able to demand reasonable fees for use of technology and to protect their industrial secrets. Staying abreast does not require Japan to completely deregulate industries such as telecommunications or biotechnology—since these are among the more heavily regulated sectors in all countries—but it does require a shift of regulatory authority toward greater protection of the health and safety of individuals and away from interference in investment choices that do not put such protection at risk. MITI and other ministries can still play a useful role in supplying information and in organizing cooperation for research and development among enterprises that compete in the marketplace. In the future, ministerial prestige and authority will depend more on their ability to do this in a useful way and less on their ability to interfere in company decisions.

Ministerial regulatory blunders have helped to fuel the current drive toward deregulation and liberalization of economic activity. The result will be a more competitive economy, as well as one with greater opportunities for many people, but equally one with greater uncertainty and less security. Moreover, we should understand the current problems of the Japanese economy not so much as a condemnation of the way it has been, but rather as a sign that change is necessary to renew the country's past dynamism in a changing environment.

Japan's Strategy of Economic Development

The Basic Strategy

In the fall of 1976, a Detroit auto executive spent a week test-driving the new Honda Accord. His experience prompted him to promise, "You'll see cars like this from Detroit within five years, the Lord willing." At the time, Japanese cars were selling so quickly that they could not be shipped across the ocean fast enough, and dealers were selling the Accord at about 20 percent over suggested list price. Divine intervention did not occur, and by 1981, Japan had passed the United States to become the world's leading manufacturer of automobiles (although the United States would subsequently regain the lead). Two years later,

General Motors signed a joint-venture agreement with Toyota, in order to use the latter's technology in producing subcompact cars at the Nummi plant in California.

Yet in 1956, Japanese-made cars cost 40 percent more to produce than comparable foreign models, and the Japanese prime minister refused to ride in one, for fear it would break down. The industry could survive only under a thick blanket of MITI protection—the least important part of which was a 40 percent tariff on cars and a 30 percent tariff on trucks—that generated much criticism from other government agencies. The low product quality resulted partly because motor vehicle producers were forced to use Japanese steel, whose prognosis was equally bad. Some observers look at the rapid growth rate and vast improvement in product quality and conclude that government guidance of the economy has been successful.

But there are also many economists with the opposite view, although government efforts to promote the collection, exchange, and spread of information generally win higher marks than its intervention in markets or in enterprise decision making. The critics note Japan's vast potential for economic growth in 1950 and give primary credit for realizing this to the Korean War stimulus, to the enthusiasm and innovativeness of private entrepreneurs, to the hardworking and docile labor force, to the absence of defense commitments, and to other factors external to the government's role. One version argues that if "the general environment was favorable for enterprise, it was . . . the entrepreneurs who seized the opportunities. Companies such as Sony, Honda, and Matsushita, founded by brilliant innovators and managers, are widely known outside Japan, but there were many others [in a variety of industries] whose executives acted as catalysts and pathfinders in the expansion of Japanese industry. It is not credible that these talented men could have been closely guided and directed by a cadre of civil servants . . . or that their vision and skills could have been adequately exploited within a tightly managed, essentially bureaucratic system."[20]

According to this view, government's contribution to economic development may have been positive. But it did not extend much beyond creating a climate of private investor confidence, assisting private enterprise with complementary public investments, providing a large volume of easy credit, restraining public spending (which freed resources for private investment), and using the state's bargaining power to cut the cost of foreign technology. As well, the formal planning process may have organized a useful information exchange, and there were many informal exchanges of technical information in which government agencies were involved. These helped Japanese firms to share the benefits of each other's experience and, thus, to bring down costs and improve quality more quickly.

However, bureaucratic interference has also had its costs, some examples of which were noted in the previous section. According to critics, moreover, there has always been a lack of coordination of separate regional and industrial poli-

cies. Each *genkyoku* bureau works closely with its particular industry, but above this level we find not coordination but "inter-agency rivalries, attempts at bureaucratic empire-building, and diffusion of responsibility."[21] Government agencies often disagree with one another in Japan, as elsewhere. For example, MITI clashes with the Fair Trade Commission over domestic competition policy and with MOF over protection of small- and medium-sized firms against foreign competition. Neither do we find a consistent, overall industrial policy framework, according to critics, although the work of MITI's Industrial Policy Bureau and Industrial Structure Council could be said to have provided this.

Nevertheless, policies are often formulated by groups working in partial isolation from one another, and they sometimes work at cross-purposes. The Liberal-Democratic Party has had to respond to a variety of special interests, and the party itself is a coalition of competing factions. Consequently, prime ministers must shuffle their cabinets often to ensure that many politicians have access to portfolios, which tends to preclude bold initiatives, to reinforce cautious attitudes, and to preserve the power of the bureaucrats within their jurisdictions. In addition, over most of the postwar era, Japan's economy has operated close to its production potential. In such conditions, subsidizing the expansion of one group of industries and firms inevitably means slowing expansion elsewhere. Often, the state has assisted declining or marginal industries with below-average growth potential—such as agriculture, textiles, wearing apparel, and coal mining—or continued subsidies for too long, as in the case of shipbuilding, steel, and petrochemicals. At the same time, many individual enterprises and industries grew, prospered, and exported without extensive government attention.

Administrators have also made some famous gaffes in allocating import quotas and investment funds. For example, MITI blocked the application of Sony to import transistor technology—for which it had paid $25,000—on the grounds that Sony lacked the ability to develop cost-effective uses for it. However, Sony went on to develop the transistor radio and, subsequently, more sophisticated products that sold well on export markets, without much government help. The Japanese computer industry, which started with a huge technological lag vis-à-vis the United States, has been the object of intensive MITI promotion efforts since the mid-1960s. But Texas Instruments, an American firm whose technology Japan needed, refused to transfer this technology except via direct investment in Japan, which MITI would not then allow. This cost five to ten years in catch-up time.

More generally, Japan has followed a strategy of economic development known as "import substitution." The basic idea is to suppress imports with quotas, tariffs, exchange controls, and informal barriers, while increasing production of similar goods at home. Thus most manufactures have been nearly impossible to import until recently, while domestic output has multiplied. Many nations have tried import substitution, and most have been disillusioned with the results. Inefficient domestic industries have been created, which require long-term protection or subsidies to survive. Frequently, such a strategy raises a nation's dependence on imports, because the import-substituting industries themselves need inputs that must be imported. In this light, it now appears that Japan pushed domestic production of some products too far, but it is also hard to think of an industry the government could encourage without increasing the country's reliance on imported energy and raw materials. The industries being promoted have usually developed an export potential more than sufficient to pay for their imported inputs, in contrast to the results in most countries that have pursued this strategy. The current account of Japan's balance of payments, which had been in fundamental deficit over most of the previous century, went into fundamental surplus after 1980.

Economists usually frown on import substitution, calling instead for specialization according to comparative advantage. That is, each nation should produce those goods in which it has a cost advantage over other nations, as well as those that are too expensive to trade because of transport costs. The sole exception relates to infant industries in which a country can reasonably expect to have a future comparative advantage once it has gained enough experience and expanded to a rate of output high enough to allow all scale economies to be realized. Protecting infant industries is consistent with comparative advantage (and one could justify much of Japan's import substitution in this way) provided the protection is not too great or kept on for too long. Unfortunately, protected industries usually acquire political power, which makes it hard to wean them, even after they have become adults. In Japan, a growing share of industrial policy resources has gone to protect inefficient industries or to manage orderly decreases of output and employment.

The Role of Households in Financing Industrial Growth

As noted earlier, a striking feature of postwar Japan has been the high rate of financial saving by households. In 1995, it was about 16 percent of disposable income, but between 1960 and 1980, it usually ran 18 to 20 percent or more, three times as high as in the United States and significantly above other Western nations. Household savings have varied from about a fourth to over half of total gross saving since 1952. They have made Japan's record growth possible by allowing up to a third of GNP to be invested, instead of the usual 15 to 25 percent or less in market economies. In part, the high rate of saving is due to thrift, but differences between Japanese and American households may result largely from differences in the budget constraints they face. In Japan, the underdeveloped social insurance system has motivated saving to prepare for old age and to build up a reserve in the event of illness or accident. Until the mid-1980s, consumer credit was sharply restricted, which required a large accumulation of savings before any large outlays.

The exclusion of a big part of household demand from official loanable funds

markets helped the government to keep interest rates low. Until April 1988, moreover, the state encouraged small savers by allowing tax-free savings accounts—up to 6 million yen in bank accounts and another 6 million yen in postal savings.[22] In the United States, by contrast, consumer credit has been freely available and mortgage interest payments have been deductible from taxable income, but there has been no tax relief on savings accounts. A typical United States household also invests a larger percentage of its disposable income in housing and other durables than does a representative Japanese household, and this is a form of saving.

Japan's low interest rate policy has acted like a tax on household savings. Economists believe that the propensity to save varies directly with the interest rate, so that lower rates mean smaller voluntary savings.[23] However, any depressing effect of low interest rates on saving in Japan has probably been more than offset by tax relief on savings accounts and to an even greater extent by the low borrowing priority of households, which have therefore had to maintain a savings reserve against contingencies and to build up savings in advance of large outlays. This is why the main effect of low interest rates has been to reduce household interest earnings and to transfer this return to business as an investment subsidy. Traditionally, Japanese have also been wary of buying stocks and bonds, and the government has helped to preserve this attitude by restricting the variety and attractiveness of securities available. Thus Japanese households have put most of their savings into banks, postal accounts, and insurance. This is why the ability to influence the allocation of loans financed by these sources has been an important part of the government's ability to direct the economy.

The Evolution of Industrial Priorities

Since the 1950s, industry-by-industry priorities have evolved systematically in Japan—from labor-intensive to physical-capital-intensive to knowledge-intensive (human-capital-intensive) production.[24] After World War II, Japan reconstructed its textile industry, both because its exports had historically financed most of the imports essential to growth—and there was a fund of accumulated knowledge and physical capital in this industry—and because the occupation authorities prevented the government from promoting any sector that could add to its capacity to wage war. In 1955, textiles accounted for 37 percent of Japan's exports, and subsidies were also being given to other labor-intensive sectors—including cameras, binoculars, sewing machines, and scientific instruments—as well as to agriculture, coal mining, and fishing.

However, by the early 1950s, the highest development priority had shifted to basic heavy industries—steel, fertilizer, electric power, and shipbuilding—in which Japan was a marginal producer by world standards. Several of these industries got a shot in the arm from the special procurement demand associated with the Korean War, but Japan was still not expected to improve its competitiveness by much over the long run. Through a combination of doggedness and ingenuity, however, it became a world industrial power. For example, by building steel plants close to the sea and by bringing down the costs of ocean transport with huge carriers, Japan was able to deliver fuel and iron ore to its factories at lower prices than many countries paid to exploit domestic resources.

Right behind development of the steel industry came promotion of steel-using industries—especially motor vehicles (whose output remained small until 1960)—but also electrical engineering, electronics, machinery, machine tools, and other metal products. Japan was successful in designing and producing high-quality, energy-efficient automobiles, which gave it a (partly unforeseen) export boost once the energy crisis was underway. Subsidies also assisted inorganic and organic chemicals during the 1960s, including petrochemicals and derivative industries such as plastics. Prior to the energy crisis, Japan did achieve a cost advantage in organic chemicals, partly because this industry was allowed to ignore most of the costs of its pollution.

By the early 1970s, priorities were shifting again, this time toward high technology and especially toward information-based industries, and a master plan had been drawn up for the regional dispersion of industry. During this decade, sophisticated machinery (including robots and aircraft), transport equipment, fabricated metal products, microelectronics, fiber optics, lasers, atomic energy, fish farming, ocean development, pollution control, solar energy, and integrated production facilities for export were all targeted for government aid. As noted earlier, Japan became a world leader in pollution control technology, besides which it began to enforce stricter environmental protection standards and introduced a generous program of compensation for its 85,000 victims of environmental pollution.

Since the energy crisis, Japan has moved increasingly into high-technology processes, with relatively modest energy and raw materials requirements and comparatively high value added per yen spent on imported inputs. These sectors have dramatically increased their share of industrial value added, while the share of raw-materials-intensive sectors has fallen.[25] In future, the technological sophistication of industry will continue to rise, along with social overhead and welfare spending, an area in which Japan now trails most developed Western nations. Microelectronics, especially semiconductors, have been a special target for domination.

As a rule, the government actively fosters no more than 5 to 10 industries at a given time. Once an industry has matured, it is expected to survive on its own, although it may continue to have better-than-average access to credit and to enjoy effective export subsidies. Both the system and its priorities have remained flexible. One of the system's strengths is that it can offer guidance, based on collective wisdom, without suppressing initiative. Thus MITI held up Sony for just two years (1952–54). Once enough businessmen, banking officials, and bureaucrats are convinced of the advantages of entering an industry, the expan-

sion of output is likely to be swift—as in the case of iron and steel, autos, home entertainment, and, most recently, semiconductors. (Once again, while decision making is slow and cumbersome, due to the need for consensus, subsequent implementation is often quick and devastating to competitors.)

Moreover, the system can be adaptable:

> For instance [in the early 1950s], Kawasaki Steel Corporation's proposal for a new integrated steel mill at a new location was completely at variance with the rationalization program put forth by other steel companies. . . . Kawasaki advanced its project against the majority opinion held by MITI bureaucrats, steel industry leaders, and banks that since Japan lacked raw material resources, no up-to-date steel mill would have sufficient international competitive power and that Kawasaki's project would result in redundant capacity. . . . However, Kawasaki started this project at its own expense . . . and obtained later approval from MITI, the Bank of Japan and the city banks, as well as the steel industry's agreement to the *fait accompli*.[26]

However, as we have implied, not all firms have been able to defy MITI as successfully as Sony and Kawasaki, and there is a growing feeling in the business community that MITI regulation is suppressing desirable initiatives in the 1990s.

The Role of Comparative Advantage

In the above strategy of evolution, a rational pattern does emerge. A country specializing according to comparative advantage will produce goods that use relatively large amounts of inputs with which the nation in question is well endowed. Thus Canada and the United States specialize in wheat production, which is land-intensive, and in computers and information-processing equipment, which utilize physical and human capital intensively. Many densely populated countries specialize in labor-intensive goods. In 1950, Japan's people were virtually its sole natural resource, and a policy of specializing according to comparative advantage therefore had to build on this. At first, the country's human resources were best utilized in labor-intensive industries, where their diligence, patience, capacity for hard work, and ingenuity gave them an advantage over competitors. As noted earlier, there was also an accumulation of capital and experience here after the war.

But this was just the beginning. The Japanese government had the means to mobilize savings and to influence the ways in which these were channeled into productive investment. This allowed Japan to shift its emphasis toward more capital-intensive heavy and chemical industries, which are basic to any major development effort. Reliance on trade for natural resources and mineral fuels plus a naval tradition dictated a strong merchant marine, and Japan quickly

ocean freight rates. At the same time, Japanese have been generally well educated and ambitious, and Japan trebled its supply of technically trained people during the 1950s. Rapid expansion in this area continued and helped to pave the way for a shift toward knowledge-intensive or human-capital-intensive industries, beginning in the 1970s. The shift from labor-intensive toward physical-capital-intensive and then toward knowledge-intensive production is not unusual. What is remarkable is the speed of Japan's transition, as well as the high quality of product eventually achieved in each area.

Within this broad evolution, the government appears to have used both demand-side and supply-side criteria to help determine which industries to encourage. During an era of record economic growth in many parts of the world, it has tried to promote products whose price and income elasticities of demand were high, so that decreases in price and increases in world income would lead to even larger percentage increases in quantity demanded. To achieve cost reductions that would permit price decreases, it has focused on production processes in which potential gains from importing new technology and from experience or scale economies were expected to be large. Since the energy crisis, Japan has also raised the share of domestic value added in industrial output and reduced the energy intensity of production and consumption. (The latter has raised the priority of knowledge-intensive industries, in which gains from accumulating experience with the relevant technologies are high.) Once established in a foreign market, Japanese firms have tried to reduce the price elasticity of demand for their products, in effect, by establishing a reputation for quality, reliability, and after-sale service.

To encourage the growth of priority sectors, the government has used three basic instruments. First, it has protected domestic manufacturers from foreign competition, thereby reserving most of Japan's large domestic market for them, one motive being to permit rapid realization of experience and scale economies. Second, it has increased the availability of low-cost finance via its leverage over financial markets and its tax-subsidy policies. Third, it has ensured the availability of raw materials, energy, information, and technology at reasonable prices (although subject to Japan's ability to procure these on the world market). Domestic producers have therefore received a variety of explicit and implicit subsidies, especially when trying to establish themselves in new lines of production. However, these have often been given with a quid pro quo. The government has expected firms in sectors with growth potential to develop and expand their export markets. Enterprises receiving technology from abroad, with the help of MITI or other government agencies, have also had to share this with rival producers, along with a variety of cost and technical data. During the 1950s and 1960s, one result was to preserve the traditional absence of protection for industrial secrets, thereby speeding technological diffusion at the cost of discouraging major innovations (although not necessarily minor ones) by Japanese enterprises.

collapsed before getting off the ground. If investors had been too cautious at the outset, if the weakness of labor unions and traditional worker attitudes had not fostered wage restraint, if government had not established the expectation that markets would grow, or if a few key sectors had failed to expand and become bottlenecks, subsidies might simply have expanded profits or increased wages without stimulating a commensurate rise in output. If most firms had been unwilling to expand rapidly, those that sought to do so would have encountered difficulties in obtaining supplies at reasonable prices and with good quality, or in finding markets for their products. Thus they would have taken losses, while those who played it safe by restricting supply would have prospered or at least survived, and the psychological effects of such a lesson could have devastated the government's growth ambition. The role of the city banks was also crucial, since they made the loans that fueled the economic miracle. Many of these were risky, and government guarantees often formed part of their collateral. Such guarantees were worth less during the late 1940s and early 1950s than they came to be, after rapid growth was established.

Once Japan's industrial initiative was mobilized, it had a large potential to draw on, and several constraints on growth operating in the West did not apply there. Japan's people were well educated and achievement-oriented; with the end of empire and the diminished status of its armed forces after World War II, the main achievement outlet became economic development. The existence of the dual economy meant that Japan had reserves of underutilized but high-quality labor that could be transferred to more productive jobs in modern industry, once the capital and technology were in place. Another benefit of backwardness was a backlog of technology that Japan could import and adapt to its needs. Finally, savings rose with incomes, and there has been no large defense establishment to compete with investment for the use of this money.

As growth proceeded, Japan plausibly specialized according to dynamic comparative advantage via import substitution. The two were compatible, because Japan's comparative advantage kept changing as it accumulated physical and human capital. The country repeatedly expanded industries in which technological improvements and gains from economies of scale and experience were substantial. The necessary investments involved considerable risk, but once expansion was achieved and experience gained, relative prices and costs were quite different from what they had been at the outset. Again and again, Japan achieved a cost or quality advantage, where previously it had not been competitive.[27] If the government had not subsidized investment demand and technological diffusion, however, it is far from clear that such rapid growth would have occurred.

The auto industry is the most obvious example of Japan's postwar success, but the country's experience with audio equipment is no less remarkable. Over 80 percent of the high-fidelity products sold in North America have been made in Japan. Yet most of the inventions that launched the industry during the late

1940s and early 1950s originated in the United States. Many pioneering U.S. companies then went bankrupt in an expanding market or else gave up most production to become importing and marketing agents for Japanese firms, enabling the latter to sell under locally known brand names. The reason usually given for Japan's success in this competition is greater access to highly productive, but relatively low-wage, skilled and semiskilled labor and engineering talent. There is some truth to this claim, and the consumer electronics industry has a low natural resource requirement. Thus it suits Japan's endowments.

But Japanese companies also had better access to low-cost funds for expansion of plant and equipment and for product development. Until the 1960s, large companies in the American radio, phonograph, and television industry saw little future in high fidelity and did not appreciate the technological advantage that this could provide for manufacture of related products, such as television sets and video cassette recorders. The entire consumer electronics industry, and much of producer electronics, is based on a small number of technological breakthroughs, mastery of which potentially leads to cost-effectiveness in a wide range of products. Because prospective lenders in the United States failed to realize this during the 1950s, the small American firms engaged in production of high fidelity were unable to borrow the investment funds that expansion and large-scale product development required. By contrast, Japanese banks, businessmen, and (after initial hesitation) government officials were enthusiastic. Banks lent money, partly against the promise of future sales, and organized an exchange of technological information. Many Japanese producers went on to become world leaders in television and videotape recorders, as well as in audio.

Over time, Japanese industrial policy has become less intervention-intensive and more information-intensive, in the specific sense of helping to produce and spread technical information, as well as to raise technological and quality standards. To a degree, this reflects the evolution toward more knowledge-intensive production, in which early access to improved technology and rapid accumulation of experience economies are more crucial than ever to export success. The government has also expanded its basic research and development role, as the technological backlog readily available to Japan for adoption from abroad has declined. In addition, the evolution of industrial policy reflects a reduced power of intervention, which has forced MITI and other government agencies to fashion new niches for themselves.

This decline should not be overstated. Some kinds of intervention have expanded since the high-growth era—notably pollution control and the orderly withdrawal of capacity from depressed industries. However, calls for deregulation have been especially loud during the 1990s, and MITI's record as helper and information provider for high-technology sectors has been mixed. Its effort to build the world's first fifth-generation computer was unsuccessful, for example, and it tried to force an obsolete technology for high-definition television on Japan's efficient electronics industry. Deregulation means that government

should have less control over price setting—allowing suppliers to undercut their competition more easily—and also less authority to prevent firms from entering new markets and introducing products that are new in Japan. Key areas for deregulation during the 1990s are telecommunications, banking and finance, trucking, air transport, and agriculture.

Toward the Future

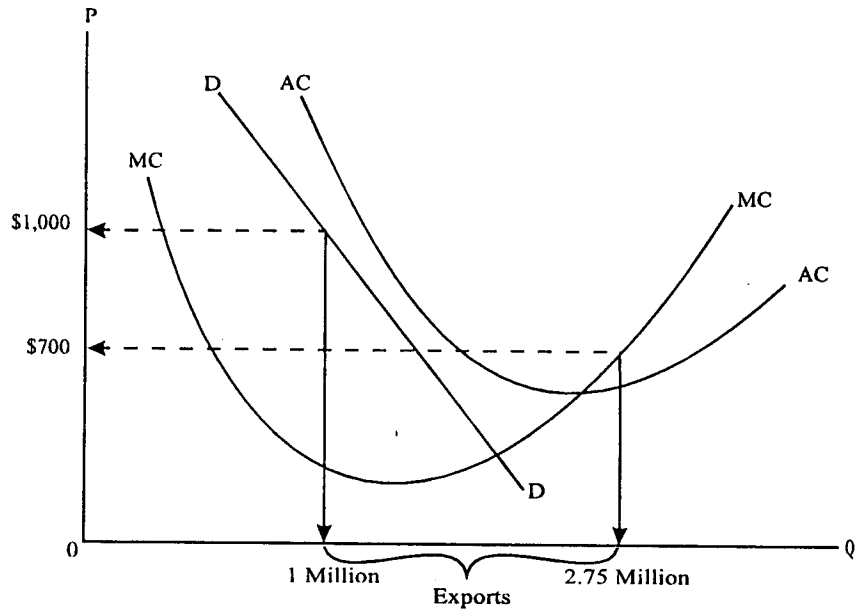
Deregulation and the Large-Scale Retail Store Law

In the years immediately following World War II, the Japanese economic miracle was both unprecedented and unexpected. Thus it is sometimes useful to remind ourselves how far Japan has come, from a nation in ruins to one whose economic system is viewed as a model by most of Asia. Unfortunately, Japan's future is again a subject for speculation, for it seems to have passed a watershed during the 1980s and especially during the 1990s as a result of basic changes in the external and internal environments. These include the appearance of intense competition from newly emerging industrial nations (such as South Korea and Taiwan); the pressures to decontrol imports, money-capital flows, and financial markets; soaring land prices and foreign-currency prices of the yen after financial deregulation, followed by a collapse of asset prices, recession, and relative stagnation in the 1990s; a succession of scandals involving government officials; and pent-up internal pressures, which have boosted spending on welfare and social overhead capital and led to growing domestic competition and calls for further deregulation.

In 1997, it is too soon to foresee the full impact of deregulation on the Japanese economy over the long run, but in magnitude the resulting changes may come to rival those of the latter 1940s, if liberalization is allowed to continue. Its effects already show up in wholesale and consumer prices. On a base of 1990=100, Japan's wholesale price index for 1995 stood at about 92, meaning that wholesale prices *fell* by 8 percent over the period 1990–95. Consumer price behavior is more mysterious. On a base of 1990=100, the consumer price index rose by 7 percent to reach 107 in 1995. This is an average increase of about 1.3 percent per year. However, few believe the official index is correct.[28] Some recalculations suggest that consumer prices fell by 2 to 3 percent in 1992 and again in 1993. In 1994 and 1995, decreases were greater still, perhaps averaging 4 percent per year. If such estimates are correct, consumer prices would have fallen by 8 to 9 percent from 1990 to 1995. For some items, the decrease is much greater. The cost of long-distance phone calls fell by 70 percent from 1985 to 1995, although rates are still much higher than in Western countries.

To understand what has happened, we first sketch briefly how prices were set in postwar Japan up to the 1990s. Three key ingredients in price determination

Figure 6.1 **Prices of Japanese Products at Home Versus Prices of the Same Goods Abroad**



mal barriers have kept imports from undercutting high domestic prices; manufacturer control over pricing at wholesale and retail levels; and weak price competition, as a rule, between manufacturers on the domestic market, which is often enforced by government regulations and oversight. Traditionally, distribution of many products in Japan has been handled by a multitude of small wholesale and retail shops. There are usually more wholesale middlemen between manufacturing and retail levels than would be normal in the West, and costs of getting the product from manufacturer to final user have been relatively high. The larger and economically stronger manufacturers sometimes control wholesalers and retailers through vertical *keiretsu,* but even when this is not the case, long-term ties between manufacturers and distributors and within distribution networks are the norm. Once excluded by a manufacturer, a retailer or wholesaler would find it difficult to obtain a replacement supplier.

Figure 6.1 shows traditional pricing in Japan and abroad for an export product. For definiteness, let this be a color TV set. Weaker price competition at home means that the domestic price will exceed the export price. Moreover, the Japanese manufacturer will set its list price at home high enough to allow relatively high-cost distributors to survive. With domestic demand DD and a much more elastic foreign demand (not shown), this firm sets a home price of $1,000

1.75 million. As DD lies entirely below the firm's average cost, AC, it could not survive on domestic sales alone without a subsidy. However, by exporting, it realizes scale economies, which bring down AC and allow a profit to be made, even though the export price is less than the home price. In 1991, for example, a Sony Walkman that could be picked up for about $40 in New York cost over $200 in Japan. A Toyota Corolla that went for less than $12,000 in New York sold for about $16,000 in Tokyo, although the latter price includes a greater commitment to service after the sale.

Over time, forces will operate to squeeze the gap between the home and export prices. When a nation exports as successfully as Japan has done, one consequence is a rising value of its currency (the yen) against the currencies of other nations. In order to buy Japanese goods, foreigners must sell their own currencies for yen, which puts upward pressure on the latter and downward pressure on the former. This makes exports more expensive. A rising yen can be offset by reductions in average cost owing to experience economies, but eventually most of these potential gains will be exhausted. In addition, because of the lifetime employment system, large Japanese companies often keep on more workers than they need, especially when their workforces are aging, as has been true during the 1990s. By raising quality and building customer loyalty abroad (and thereby reducing the price elasticity of export demand), they have been able to hold on to export markets, albeit not without raising export prices. Moreover, the rising yen has caused Japan to shift more and more production abroad, mainly to southeast Asia. This "hollowing out" of Japanese manufacturing has caused much concern, although as of 1996, only about 10 percent of Japan's industrial output is produced abroad, versus around 20 percent for Germany and the United States.

The other side of the coin is that a rising yen potentially makes imported goods cheaper in Japan. Indeed, greater import penetration could have far-reaching effects, by forcing domestic suppliers to compete on price. We have seen that Japan kept manufactured import volumes low for many years—increasingly with informal barriers, including bureaucratic red tape and questionable product standards, as well as the distribution system itself, which tended to shun foreign goods. As one might expect, Japan's trading partners put growing pressure on it to open its markets, and foreign suppliers also became better at adapting their products for the Japanese market and at selling in Japan. Gradually Japan's markets did open, although the major breakthrough came only in the 1990s, when it was triggered by two key events.

The first was the collapse of the economic (or asset price) bubble, owing to the Bank of Japan's sudden tightening of monetary policy. This constrained domestic demand and sent the economy into its worst recession in over 40 years, which lasted for nearly five years and caused a basic change in the attitudes of Japanese consumers. They became more price-conscious and willing to look for bargains. This was possible, in part, because of a key change in the Large-Scale

Retail Store (LSRS) law, brought about via pressure from the United States in the Structural Impediments Initiatives talks in 1989–90.[29] Because the United States accounted for almost 30 percent of Japan's exports, the Americans had strong leverage in these talks. They believed that large retail stores were more likely than small shops to carry imported goods. Thus they pressed to weaken the LSRS law, which originally took effect in 1974 and was strengthened via revision in 1979. The law was strengthened again in 1982, not by the Diet, but through MITI's administrative guidance. The purpose of the law was to protect small retailers from low-cost competition by large stores.

The LSRS gave small stores and local governments power to delay applications to open large retail stores for up to ten years. In effect, such stores could be kept out of markets by the very stores with which they would be competing. The revised law shortened the waiting period to two years or less and took the power to block applications out of the hands of competing stores and local governments. One result was the appearance of stores so new to Japan that they were called *disukaunto stoa,* since no word existed for them previously in the Japanese language. Discount stores took the lead in *kakaku hakai,* or price busting, but other Japanese retailers also joined in, including the consumer cooperative Seikyo and Japan's largest private retailer, Daiei. This helped to reduce the *naigai kakakusa,* or difference between prices in Japan and abroad. Nowadays, Japanese often will not buy an item if they do not receive a discount from the list price. The official consumer price index excludes goods sold at reduced prices, ignores all stores open for less than one year, and still tends to shun discount stores, hence its upward bias.

Other factors also played a role. As recently as 1980, more than 40 percent of Japanese households had no car. Because transport costs had historically been high for many people, stores were located near to homes, which was one of the reasons for a large number of small shops, just as had earlier been the case in North America and Europe. But ownership of motor vehicles was also rising—by 1995, fewer than 20 percent of Japanese households were without one—and this lowered transport costs. As a result, it became economical to have larger stores, which were further apart and located in areas where land is less expensive. The latter reduced storage costs and allowed these stores to keep more inventory. Thus they require fewer deliveries of supplies, and each delivery can be much larger than for small retail shops. This in turn allows fewer and larger wholesale depots and a shorter chain of wholesale suppliers reaching back to the manufacturer. The fall in land prices since 1991 has reinforced these tendencies, which the LSRS law was in some measure designed to counteract. For better or worse, the number of Western-style shopping centers has been rising, and bargaining power has shifted from manufacturers toward retailers, in part because the former have had excess capacity during the 1990s.

All this should not be overstated. Japan still has the highest consumer prices in the OECD group of nations, although it is also the only one in which prices

have been falling. It appears nearly certain that Japan will have a more competitive, less regulated domestic economy in the early twenty-first century than it had during most of the last half of the twentieth century. One result will be a break for consumers, which has been long in coming, but there is also a downside. The combination of competition and recession is already putting pressure on the "lifetime" or career employment system, which the government is countering with its own pressure (in the form of administrative guidance by the Labor Ministry) and subsidies to firms designed to reduce the costs of keeping employees on.

Traditionally, women have been excluded from lifetime employment, but were starting to make gains in the 1980s. In 1985, the Diet passed the Equal Opportunity Employment Act, designed to give equal job opportunities to men and women (although this was far from being realized). Now these gains are being reversed to a degree, and women remain Japan's most underutilized resource in the workplace. Nearly 80 percent of female university graduates work as secretaries. It has also been harder than ever for young people to find good jobs during the 1990s. This having been said, we note as well that the burden of the 1990s recession has fallen more evenly on labor and capital in Japan than in the West. Japanese profits have been depressed, and during the 1990s the Tokyo stock exchange (Nikkei) average has usually been at least 40 percent below its peak at the end of 1989. Real wages have risen since then, and unemployment remains moderate, although official statistics fail to count many of the jobless. A survey of Japanese households in late 1995 by the prime minister's office found that 73 percent were content with their present living standards, the highest proportion ever recorded.[30]

Problems on the Road Ahead

Nevertheless, if we take a long-run look ahead, say to 2020, Japan faces three potentially critical problems. The first will be continuing pressure on unemployment to rise. We recall that Japan has run a current account surplus in its balance of payments every year since 1980. Beginning in 1985, these surpluses have generally been large—and therefore a source of international pressure on Japan to open its markets—but in real terms, net exports (exports minus imports) measured in U.S. dollars actually fell between 1992 and 1996. It now seems likely that as the Japanese economy becomes more open, the current account surplus will fall further. To a degree, this will result simply from an outward shift in the (realized) Japanese demand for imported goods as barriers to imports decrease, but more basic forces will also be at work.

When a nation runs a current account surplus for 16 straight years, as Japan had done by the end of 1996, this surplus is nearly always offset by a deficit in the capital account of the balance of payments. The country with the current account surplus saves more than it invests at home, and this savings surplus is

invested overseas. Moreover, when a nation persistently saves more than it invests, it is bound to have a current account surplus, since it must have a capital account deficit. A nation that persistently invests more than it saves, such as the United States, is bound to have a persistent current account deficit (as the United States has had since 1981). The forces that determine saving and investment within a nation are also the most basic forces at work to determine whether its current account is in surplus or deficit.

In Japan, aging of the population will reduce the average propensity to save out of household income, and there may be further reductions owing to financial deregulation. As a rule, the relatively young and relatively old save smaller percentages of their incomes than do those in their prime working years. A lower savings share of GDP may well be the dominant long-run force causing Japan's current account surplus to decline, or even to disappear. One consequence is that future job creation must come from expansion of domestic demand and will be largely in services, notably health care. With a more competitive economy, there will be more pressure on lifetime employment, requiring the government to become more involved in worker training. (Indeed, this has already begun.) Future unemployment is nevertheless likely to be higher than in the past and could threaten Japan's social stability and cohesion.

Second, Japan's population is aging more rapidly than that of any other developed nation, as noted earlier. Together with increases in unemployment and poverty, this will put enormous pressure on Japan's system of social insurance and welfare, at a time when the government budget deficit is large and the government's debt is rising rapidly relative to GDP. In addition, further infusions of tax revenue will probably be necessary to bail out failed financial institutions before Japan is able to put this crisis behind it. Taxes and payroll fees (which finance social insurance) will therefore rise. However, increases in payroll fees also make labor more expensive, which will cause further unemployment increases, unless there is a change in the method of financing social insurance and welfare.

Japan's aging population can be viewed as a liability, but also as a potential resource whose full utilization requires continuing increases in the technological sophistication (or knowledge intensity) of production and, correspondingly, in value added per worker. A bright spot has been Japan's improved ability to innovate and even to outperform some Western countries in this regard. It still tries to import the best technology from abroad, but it is also assuming a leading role in basic research and new product development. A 1979 MITI white paper on science and technology argued that the 1950s was a period of introducing foreign technology into Japan, while the 1960s was mainly a time of improving on basic technology that had already been adopted. The 1970s were seen as a period of transition to indigenous technology.

The paper then proposed that an indigenous base for technological progress be fully established in order to allow Japan

nation of science and technology." Research and development spending has since climbed to over 2.5 percent of GNP, placing Japan in the front ranks of industrial nations with respect to this measure. Even more important for the continuing realization of MITI's vision, however, will be continuing deregulation of high-technology sectors, giving Japanese firms more freedom to innovate, to invent, to undertake research and product development, and to market their products. This does not preclude an informational or guidance role for MITI, but this should be based on augmenting and improving the flow of information. From time immemorial, governments have based their power on control over information. One of the great ironies of the twentieth century, however, is that those governments that most suppressed and distorted information often wound up weakening their economies and even undermining their own power by suppressing technological progress, not least in information-related technologies.

The final hurdle is sometimes referred to as "Japan's land problem."[31] Earlier we noted that Japan has nearly the world's highest food and land prices, which reduce the real incomes of most urban dwellers. Home ownership within reasonable commuting distance from work is unaffordable for many middle-class Japanese, threatening a social and motivational crisis. By comparison with developed Western countries, "Japanese housing tends to have fewer amenities, to be inconveniently located, and to be serviced by inadequate infrastructure."[32] Living space is also relatively small. The major reason is the high price of land. Although land prices fell after the collapse of the economic bubble, they were still on average about 12 times as high in 1994 as in 1955. One reason for this is Japan's high rate of population density, especially since only 14 to 15 percent of the country can be inhabited. One source notes that "Japan has the second-largest population among OECD countries, but is only eighth-largest in total land area. . . . GNP per unit of arable land in Japan in 1990 was eight times higher than the average of Germany, France, Italy, and the United Kingdom."[33]

However, land prices would be far lower in Japan if land were better allocated between uses—with less being held in agriculture—and if land outside of farming were more intensively utilized. High land prices result partly from high food prices supported by strict import barriers, especially on rice. Because rice growing is land-intensive, the high price of rice makes land more valuable in rice production, besides which taxation of land in farming has been more generous than taxation of land in other uses. In 1990, half of Japan's population lived in the three major metropolitan areas of Tokyo, Osaka, and Nagoya. Yet 10 percent of Japan's agricultural land was also within these areas, where it accounts for twice the amount of land in residential use. Over 40 percent of the land area in Japan's major cities was used for farming. Generally this land was worth less in agriculture than in residential or commercial use, but restrictions kept it from being taken out of farming.

Nevertheless, people have often found ways around these restrictions, and the

ture and land in other uses. By propping up food prices and, indirectly, the value of farmland, import barriers reduce the supply of land for housing, commerce, and industry, thereby keeping prices high for all kinds of real estate. By contrast, with free international trade and easy movement of land between uses, land would tend to be used where its value is greatest, and land of comparable quality would be worth about the same in Japan as, say, in California. In such a scenario, Japanese households might well save less, since housing is a major reason for saving, and Japan would import a substantial percentage of domestic rice consumption, whereas the domestic rice market is now nearly closed. It is scheduled to open slightly in 2001.

Considerations of security of domestic food supply will probably prevent the rice market from opening completely, but it is also true that food price supports were the major way in which the LDP bought the votes of farmers. Even before the electoral reforms of 1994, rural voters were losing power because of urbanization and the relative decline of agriculture. Tables 6.2 and 6.3 show this. Despite subsidies, agriculture's shares of labor and value added have progressively declined. This brought a gradual erosion of rural voting power through periodic (although limited) reapportionment of election districts. The 1994 reforms deflated the power of rural districts further, making additional reduction in agricultural protection all but certain, although the extent and speed of this reduction (as well as the extent of loss of power by rural districts) is not yet clear. As the real income of farm families exceeds that of urban dwellers on average, the resulting redistribution is likely to increase equality.

Because property and inheritance taxes on land have been quite low in Japan and because land values rose continually until the early 1990s, land has been the ideal form in which to hold or to store wealth. This does not necessarily prevent it from being used efficiently, although the owner will usually want to lease his or her land rather than to manage it directly. However, an owner in Japan would then run into the Land and House Lease Laws, which were passed to protect tenants during the postwar occupation. This protection is so strong that leasing land removes most of the landlord's control over its use, which passes to the tenants. In particular, the landlord would often be unable to sell the land, to evict tenants, or even to raise their rent.

As a result, some of the world's most expensive land has remained vacant or in low-intensity use, "in order to benefit from capital gains even at the cost of foregoing the income gain."[34] Paradoxically, many prospective tenants would have been better off with weaker legal protection, because the supply of residential land would have been greater and prices and rents would have been lower. To raise the supply of residential and commercial property would require a weakening of the Land and House Lease Laws—while maintaining reasonable tenant protection—plus increases in property and inheritance taxes and their equalization across different uses of land. Ultimately, it would also require a weakening of restrictions that keep land in urban areas from being taken out

Table 6.2

Evolution of the Breakdown of the Japanese Labor Force by Industry (in percentages)

Year	Agriculture, Forestry, Fishing	Mining and Quarrying	Manufacturing	Construction	Transportation, Communications, Utilities	Trade, Finance, and Real Estate	Other Services
1952	42.1	1.5	18.5	4.3	5.1	15.4	13.1
1961	30.0	0.8	22.5	6.1	5.5	19.8	15.3
1974	12.9	0.3	27.2	8.9	7.0	24.1	19.6
1986	8.5	0.1	24.7	9.1	6.6	26.7	24.3
1994	5.8	0.1	22.1	10.2	6.7	26.4	27.6

Sources for Tables 6.2 and 6.3: Bank of Japan, Statistics Department, *Economic Statistics Annual,* 1959, 1971, 1976, 1988, and 1995 editions (Tokyo: Bank of Japan, 1960, 1972, 1977, 1989, 1996).

Table 6.3

Evolution of the Breakdown of Japanese Net Domestic Product by Sector of Origin (in percentages)

Year	Agriculture, Forestry, Fishing	Mining and Quarrying	Manufacturing	Construction	Transportation, Communications, Utilities	Wholesale and Retail Trade	Finance and Real Estate	Other Services
1952	23.5	3.6	23.5	3.9	8.2	17.1	4.9	15.3
1961	14.0	1.4	30.0	5.8	9.5	16.1	8.9	14.2
1974	5.2	0.6	31.8	8.7	6.3	15.7	12.3	19.5
1986	2.6	0.4	26.3	7.6	8.8	13.9	13.9	27.1
1994	2.1	0.2	24.5	10.8	9.2	12.7	17.9	22.6

Sources for Tables 6.2 and 6.3: Bank of Japan, Statistics Department, *Economic Statistics Annual,* 1959, 1971, 1976, 1988, and 1995 editions (Tokyo: Bank of Japan, 1960, 1972, 1977, 1989, 1996).

of agriculture. The first steps in making each of these changes have been made. For example, farmland zoned for residential use is now taxed at the same (higher) rate as residential land, and one can no longer avoid Japan's steep inheritance taxes by holding agricultural land in urban areas. Moreover, property taxes have been raised, and a new Land Lease Law has been put into effect, although this is not retroactive. Further reforms may be necessary to achieve the stated goal of reducing the average price of a 70 square meter (or 705 square feet) residence to five times average annual household income.

When we add the continuing pressures to liberalize international trade and payments, meet foreign competition, expand social overhead capital, raise social welfare spending, and reduce environmental disruption, we can see that economic and political life must continue to change over the next twenty years, perhaps profoundly. Although Japan's growth will be lower than in the past, an opportunity also exists to translate the increases in the value of the yen over the previous quarter century—the fruits of past increases in output and efficiency—into standard-of-living gains for ordinary Japanese. To do this, the government will have to further liberalize imports, especially of farm produce, and further deregulate the domestic economy, while helping to transfer resources out of sectors harmed by liberalization and promote the growth of industries in which Japan has (or can achieve) a comparative advantage. Deregulation also requires greater freedom of information than heretofore, in order that firms and households can make rational decisions. All this will be no easy task, and Japan's ability to carry it out may well determine whether future economic historians regard it as the success story of this century.

Notes

1. These are conveniently summarized by G. C. Allen on p. 38 of his *The Japanese Economy* (London: Weidenfeld and Nicholson, 1981).

2. Ryutaro Komiya, "Planning in Japan," in Morris Bornstein, ed., *Economic Planning: East and West* (Cambridge, Mass.: Ballinger, 1975), p. 193.

3. The government provided a myriad of subsidies to priority sectors, as well as assurances about the availability of export markets. See G. C. Allen, *Japan's Economic Expansion* (London: Oxford University Press, 1965), ch. 3.

4. W. V. Rapp, "Japan: Its Industrial Policies and Corporate Behavior," *Columbia Journal of World Business,* Spring 1977.

5. Because of Japan's lack of natural resources, this industry has been of critical importance, and by the mid-1970s, Japan was building about half the world's ships. It still has a large share of the international market. However, shipbuilding the world over became one of the worst casualties of the energy crisis. In Japan, output fell by two-thirds between 1976 and 1979, before recovering somewhat. Government leaders and industry officials decided together which shipyards would close. No subsidies were paid to keep yards open, and most workers were relocated to new jobs. Prior to this reversal, Komiya wrote, "under Planned Shipbuilding, the government announces every year the total tonnage of each major type of ship . . . to be built . . . and selects qualified shipowners and shipbuilders from among the applicants. A certain percentage—recently 50 percent to 80 percent—of the total funds necessary for new ships is supplied by the Japan Development Bank under terms substantially more favorable than ordinary financing. More than two-thirds of ocean-going ships now carrying the Japanese flag were built under Planned Shipbuilding" (Komiya, "Planning in Japan," p. 216).

6. E. J. Kaplan, *Japan: The Government-Business Relationship* (Washington, D.C.: U.S. Government Printing Office, 1972), p. 64. Komiya, however, in "Planning in Japan," is less impressed with MOF's power.

7. Rapp, "Japan: Its Industrial Policies," p. 40.

8. The United States has been the leading supplier of technology to Japan, followed by the United Kingdom and West Germany.

9. For a discussion of the sharing of technological know-how during the Meiji era, see G. R. Saxonhouse, "A Tale of Japanese Technological Diffusion in the Meiji Period," *Journal of Economic History,* March 1974. Regarding quality promotion in Japan, see D. A. Garvin, "Japanese Quality Management," *Columbia Journal of World Business,* Fall 1984. Finally, see "Novel Technique Shows Japanese Outpace Americans in Innovation," *New York Times,* March 7, 1988, p. 1. Regarding the study mentioned at the end of this paragraph, see Jeffrey Bernstein and Pierre Mohnen, "International R & D Spillovers Between U.S. and Japanese R & D Intensive Sectors," C.V. Starr Center of Applied Economies, New York University, New York, New York, economic research report no. 94–20, May 1994.

10. R. Komiya, "Japan's Non-Tariff Barriers on Manufactures," paper presented to the Fourth Pacific Trade and Development Conference, Ottawa, Canada, October 1971.

11. See Kaplan, *Japan: The Government-Business Relationship,* especially pp. 103–106. MITI also used its control over imports of parts and technology to eliminate two Japanese firms from the industry, since it feared "excessive" competition. As well, it succeeded in transferring the manufacture of auto parts to Japan through an arrangement with foreign patent holders. MITI agreed to guarantee royalty payments for the use of foreign technology, provided patent holders would allow the transfer of 90 percent of parts manufacture to Japan within five years.

12. Most products must still undergo lengthy and stringent testing before they can be sold in Japan, although there have been major relaxations of this requirement. Grounds of exclusion are often questionable. For example, Canada waited many years for the Japanese government to reclassify British Columbia softwood plywood as "safe for house construction," despite its widespread use as a building material in North America. Japanese inspectors claim that British Columbia apples contain coddling moths, which have not been a serious problem in Canada. Product standards often change. In 1976, when its own auto exports were booming, many foreign cars were excluded from Japan's home market because of failure to pass emissions control tests, which Japanese autos, except Honda, failed as well. For many years, any imported cosmetic that contained an ingredient not on a government list was held up for a year or more to be tested. The list was kept secret from foreign manufacturers. Items restricted on the grounds that they had military applications have included buttons, which, after all, are part of any uniform. And so on.

13. We note as well that Japanese mergers are effectively fusions of two or more different family units and sometimes take years to consummate. Within the newly created enterprise, each group of employees identifies with and continues to give its loyalty to the old firm, treating the other group as outsiders. For this reason, it takes longer to realize the potential advantages of mergers in Japan than in the West.

14. Komiya, "Japan's Non-Tariff Barriers on Manufactures," p. 20.

15. Ibid., pp. 20–21.

16. See David Weinstein, "Evaluating Administrative Guidance and Cartels in Japan," *Journal of the Japanese and International Economies,* vol. 9, 1995, pp. 200–223.

17. See David C. Hulme, "The Bureaucrats' Worst Enemy," *Intersect Japan,* February 1996, pp. 26–29, and David Hilburn, "Can Japan Get Back in the Race," *Intersect Japan,* September 1994, pp. 10–14.

18. See Dirk Pilat, "The Sectoral Productivity Performance of Japan and the United States, 1885–1990," *Review of Income and Wealth,* December 1993, pp. 357–375. See, as well, *The Japanese Economy,* Hearing Before the U.S. Congress, Joint Economic Committee, July 26, 1994 (Washington, D.C.: U.S. Government Printing Office, 1994).

19. See Sheryl Wu Dunn, "Japan's Vaunted Bureaucrats, the Real Power Behind the Throne, Are Under Siege," *New York Times,* May 5, 1996, p. 8.

20. Phillip Trezise and Yukio Suzuki, "Politics, Government, and Economic Growth," in Hugh Patrick and Henry Rosovsky, eds., *Asia's New Giant: How the Japanese Economy Works* (Washington, D.C.: Brookings Institution, 1976), p. 810. A similar view is put forward by Komiya in "Planning in Japan." See, as well, Kotaro Suzumura and Masahiro Okuno-Fujiwara, "Industrial Policy in Japan: Overview and Evaluation," Australian National University, Centre for Economic Policy Research, discussion paper no. 156, Canberra, January 1987, and Richard Beason and David Weinstein, "Growth, Economies of Scale, and Targeting in Japan (1955–1990)," Harvard University, Harvard Institute of Economic Research, Cambridge, Mass., discussion paper no. 1644, June 1993.

21. Trezise and Suzuki, "Politics, Government and Economic Growth," p. 787.

22. In addition, over half the large semiannual bonuses paid to lifetime employees are saved.

23. However, while the substitution effect of a higher interest rate acts to increase savings, the income effect usually acts to reduce them. The higher rate makes it costlier to consume now rather than to save. But the higher rate will also make someone with positive net savings wealthier, because any given volume of savings will buy more future consumption. On this account the individual will tend to consume more *both* in the future and in the present, i.e., to save less.

24. The discussion below borrows from G. C. Allen, *A Short Economic History of Modern Japan* (London: Allen and Unwin, 1972), 2nd ed., pp. 178–181, as well as Rapp, "Japan: Its Industrial Policies."

25. In its *Vision of International Trade and Industrial Policy for the 1980s,* MITI listed eight areas of science and technology for promotion during the 1980s and beyond. These are energy-related technology, electrical technology, advanced materials technology, traffic technology, disaster-prevention technology, life science, space development, and ocean development.

26. Hideichiro Nakamura, "Establishment of the Big Business System," *Japanese Economic Studies,* Fall 1977, p. 79.

27. The Japanese term for this process is *kaizen,* or "continuing improvement." See Masaaki Imai, *Kaizen: The Key to Japan's Competitive Success* (New York: Random House, 1986).

28. See David C. Hulme, "Price Revolution: The Chance of a Lifetime," *The Canadian* (The Canadian Chamber of Commerce in Japan Journal), Winter 1995, pp. 6–7, 8, and 12, and George Fields, "The Price Is Right (or Getting There)," *Intersect Japan,* April 1995, pp. 35–39. Finally, see OECD, *Economic Survey of Japan, 1994–95* (Paris: OECD, 1995), part IV, pp. 82–118.

29. See OECD, *Economic Survey of Japan, 1994–95,* part IV, and Asushi Kusano, "Japan's Nontransparent Markets and the Large-Scale Retail Law," *Japanese Economic Studies,* May-June/July-August 1994, pp. 67–98.

30. See *Japan Labor Bulletin,* November 1, 1995, p. 1. This type of survey was first taken in 1958.

31. See Yukio Noguchi, "Japan's Land Problem," *Japanese Economic Studies,* Spring 1992, pp. 51–77, and OECD, *Economic Survey of Japan, 1993–94* (Paris: OECD, 1994), Part IV, pp. 73–112.

32. OECD, *Economic Survey of Japan, 1993–94,* p. 86.

33. Ibid., p. 93.

34. Noguchi, "Japan's Land Problem," p. 58.

Questions for Review, Discussion, Examination

1. What have been the three basic components of planning in Japan? Which has been most important? Has formal planning under the Economic Planning Agency been of only marginal importance? Discuss briefly. How is planning used to compensate for market "failure"?

2. What are the components of Japan's informal planning structure? What role do industry associations and *genkyoku* bureaus play in plan formation? Why are negotiation and consultation important in Japanese planning?

3. Explain how MITI has promoted technological progress in Japan. Has this required a high degree of indigenous innovation? How have traditional property rights to information plus actions of the government and the banks promoted technological diffusion? Indicate one cost of this.

4. Why did MITI have so much power to regulate industrial activity during the 1950s and 1960s? What has caused this power to decline since then? How, in particular, has MITI helped to promote industrial concentration and collusion?

5. What is "administrative guidance"? Why is it important in Japan?

6. What has the Japanese government expected from Japanese firms in return for its help in promoting growth and technological diffusion?

Do government subsidies designed to increase growth in targeted sectors necessarily raise the growth of real GNP? When are they most likely to do this? (*Hint:* They will raise the growth of GNP when they increase the average social return on investment. When are they most likely to do this?)

7. Why have relations between MITI and Keidanren become more antagonistic in recent years? Does this indicate a historically new role for MITI? Explain.

8. In the past, how has the Japanese government treated access to information?

9. Broadly speaking, what are the two sources of excess or economic profit? How is government involved in each one? Which source is preferable and why?

10. Give a major cause of the growing contrast between efficient and inefficient sectors of the Japanese economy.

11. The organizational changes in the Japanese economy since the end of the postwar occupation in 1952 have apparently not been major ones. However, government priorities have changed, and some argue that they have evolved systematically.

What has been the basic strategy of economic development in Japan over the postwar era? How have priorities evolved? Has this evolution been consistent with comparative advantage? What have been some of the criteria used by government to determine which industries to promote? Finally, how has Japanese